

# EDCompass newsletter

News and resources for educators using SMART products

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## A NOTE FROM THE EDITOR

### Welcome

*"Children already come to us differentiated. It just makes sense that we would differentiate our instruction in response to them."* – Carol Ann Tomlinson

Research shows that students are more successful when they are taught in ways that are responsive to their readiness levels, interests and learning profiles. With that in mind, teachers are always exploring new ways to design curricula and deliver instruction that will unlock the minds of all students, who will naturally have varying abilities, interests and learning needs. Using the right mix of SMART products can help you do that.

This issue of the newsletter includes information about the role of technology products in supporting differentiated instruction, research and resources available on our website and best practices from your peers. We also spotlight SMART Notebook™ Math Tools software, giving you an inside look into how it can help you teach math concepts and solve equations in a single application.

As always, if you have any comments about *EDCompass*™ newsletter or any of the information featured in this issue, we'd love to hear from you. Please e-mail us your feedback at [newsletters@smarttech.com](mailto:newsletters@smarttech.com).

## THIS MONTH'S POLL

What technology products are you using to differentiate instruction in your classroom?

[Vote now](#)

## NOTES FROM THE FIELD

### Differentiation and the SMART Board™



#### By Bruce White

Ingersoll District Collegiate Institute  
Ontario, Canada

Brain research shows that students need choice to become engaged. As teachers, we respond to our students' needs by differentiating one or more of the four curricular elements of content, product, process and learning environment with the four student traits of readiness, learning profile, interest and affect.

Choice boards are a great way to engage your students. Using a bingo card or question flippers with numbers on one side and activities on the other gets students involved. If you'd like some examples, take a look at the Multiple Intelligence Choice Board and Writing Bingo for the SMART Board interactive whiteboard in this [SMART Notebook file](#) called Differentiated and Instructional Intelligence and the SMART Board.

Hide and reveal is an activity that will get your students making connections and inferences. Insert and lock an image on a SMART Notebook page and color over it using the pen tool that matches the image's background color. I use the Dice and the Spinner from the Gallery to select students to come up to the interactive whiteboard and assign them turns. Students then use the eraser to gradually reveal the image, while guessing what it is. With the Dual Page Display feature, you can have the image on one side while you write what led your students to their conclusions on the other.

Storyboarding is another good interactive activity related to choice. Have students take pictures of a project or field trip and upload them to the Gallery in SMART Notebook software. Students can arrange the pictures on the interactive whiteboard while telling a story. You can record their stories and attach sound files to the pictures. I also like word walls. I place a variety of nouns, verbs, adjectives and adverbs on the interactive whiteboard and then have students move the words to create sentences and paragraphs.

Strategies and approaches for differentiating instruction are endless, and using the SMART Board interactive whiteboard makes it easy. It keeps students engaged by offering them learning choices in an environment where they can excel.

#### Related reading from Bruce White

- [Effective Use of the Interactive Whiteboard in the Classroom: Differentiated Instruction and Effective Instructional Skills and Strategies](#)
- [Differentiated Instruction and the SMART Board](#)

# SMART Notebook Lesson Activities



Find a comprehensive database of [K-12 lesson activities](#) on the SMART Exchange™ website. The activities, many of which are standards correlated, are created by classroom teachers and SMART's team of curriculum resource developers.

Try one of the following activities during your next language arts, math or Spanish class. We've also included two presentations about differentiated instruction that have useful examples you can use in your classroom.

## Short Vowel Review

First- and second-grade language arts students can practice the sounds of short vowels in words. Each lesson incorporates auditory, visual and kinesthetic elements to appeal to all learning styles.

## Basic Fraction Review

Math students in grades 3–5 can review basic fraction vocabulary and demonstrate dividing a whole into fractional parts by using a manipulative.

## Verb Conjugation – “-er” and “-ir” Verbs

Students studying Spanish in grades 7–10 can practice conjugating regular “-er” and “-ir” verbs in the present tense.

## Differentiation Using a SMART Board and SMART Differentiated Instruction

These presentations give examples for using SMART Notebook software to address multiple learning styles.

# Supporting Differentiated Learning Environments



Find out how a technology-enabled learning environment can support differentiated instruction in the white paper, *One, some, all: Creating technology-enabled learning environments to support flexible grouping*. You can learn how the right mix of technology products can smooth transitions between individual, small-group and whole-class learning, leading to less setup time and more teaching time. Read the [white paper](#).

Or, if you'd like to learn how PDAs, student laptops and ultramobile PCs can support individual or private learning, we suggest reading the white paper, *Interactive whiteboards in 1:1 learning environments: Defining public and private learning spaces in the classroom*. Find out how products that support 1:1 learning environments can effectively engage students in the learning process and promote consistent access to personal computing devices for every student. Read the [white paper](#).

Also, check out two articles previously featured in *EDCompass* that explain how real technology-enabled classrooms reflect this approach to teaching and learning:

- *Tailoring tactics and technology to meet the needs of all students* – read the [article](#)
- *Six reasons why differentiating instruction with technology works* – read the [article](#)

## Watch a webinar about 1:1 classrooms

You can watch the previously aired SMART webinar about teaching in a 1:1 classroom environment. In *Create. Teach. Learn. Assess. Enhancing Teaching and Accelerating Learning with Technology in 1:1 Environments*, you can learn how to increase student collaboration and achievement through an effective balance of teacher- and student-led learning. Watch the [webinar](#).

## Helping teachers differentiate instruction

All students learn in different ways – some are captivated by visuals, some understand best by listening and some need to be more hands-on. SMART offers a range of products to help differentiate instruction. Are you using any of these products in your classroom?

- [SMART Board 680i or 685ix interactive whiteboard system](#)
- [SMART Notebook collaborative learning software](#)
- [SMART Response™ interactive response system](#) with 32 remotes (clickers)
- [SMART Slate™ wireless slate](#)
- [SMART Document Camera™](#)
- [SMART Audio™ classroom amplification system](#)
- [SMART Notebook SE \(Student Edition\) software bracelets](#)
- [SMART Sync™ classroom management software](#)

## New Publisher Content on the SMART Exchange

The amount of high-quality publisher content on the [SMART Exchange](#) continues to grow. These are free, copyright-cleared resources that have been professionally developed by some of the top education publishers.

Following is just a sampling of what you'll find:

- [Math and English](#) content from MPS, a Macmillan Company
- [Science](#) content from Waterford Institute™
- [Social studies, music, arts, health and ESL](#) content from Pronk
- [Current events](#) content from USA Today Education

We'll continue to add more content from publishers and teachers to the SMART Exchange, so keep checking back to see what's available.

### Scholastic creates an application for the SMART Table™

*Goldilocks and the Three Bears* is our first Scholastic [Story Stage](#) multitouch application for the SMART Table interactive learning center. Created by Scholastic UK in partnership with SMART, this Story Stage application marks the first time a global education publishing company has created an application for the SMART Table. Story Stage is a collaborative, interactive and highly creative puppet-based literacy resource that encourages groups or pairs of students to work together to create imaginative retellings of traditional stories. If a USB microphone is connected to the SMART Table, students' narrations can be recorded.



## FEATURE ARTICLE

### Differentiated Instruction



Lisa Parisi doesn't believe in teaching to the top of the class, to the bottom, or even to the middle. She believes in using every available tool, resource and strategy to reach every student in her classroom. [Read the full article.](#)

## CLASSROOM CONTENT

### SMART Response Question Sets



Find a database of [SMART Response question sets](#) on the SMART Exchange. The majority of the questions are correlated to state and provincial curriculum standards.

Try one of the following SMART Response question sets in your next science or math class.

#### Picture Addition

K–3 students can test their ability to add using pictures.

#### Punctuating Sentences

Language arts students in grades 4–6 can test their ability to correct punctuation in sentences.

#### Latitude and Longitude

Social studies students in grades 4–6 can test their knowledge of latitude and longitude.

#### Characters and Characterization

English students in grades 6–8 can test their ability to understand the types of characters and characterization used by authors.

#### What is a Biome?

Geography and science students in grades 7–9 can test their knowledge of the different types of biomes.

#### Surface Area

Math students in grades 10–12 can test their ability to find the surface area of prisms, cylinders, cones and pyramids.

## Jeff's SMART Notebook Tips



Each month in this column, you'll find a new tip from Jeff Taylor, Product Manager for SMART Notebook. This month, Jeff explains how to save images and SMART Notebook pages to My Content for future use.

### Adding an image

Once you have your image, copy and paste it to a SMART Notebook page and click the Gallery tab.

Then, drag and drop the image into the folder labeled My Content.

You can also create subfolders within My Content to better organize your images and pages.

### Adding a page

Add, edit and manipulate objects on a SMART Notebook page until they appear exactly as you want them.

From the Page Sorter in the sidebar, click the page you want to save and drag it to the Gallery tab icon. The Gallery will open and you can drop the page into your My Content folder.

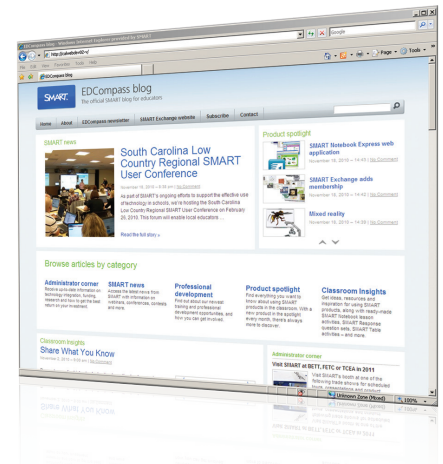
Once the images and pages are saved in My Content, they're easy to access and are available whenever you need them.

Download the latest version of SMART Notebook software [here](#).

## EDCompass Enters the Blogosphere

Would you like to receive more ready-made content for your lessons, tips and tricks to better use SMART products, expert opinions on the latest trends in education and insightful articles about how other teachers are creating magic in the classroom? Well, with the *EDCompass* blog launching in January, we can connect with you 365 days a year!

Featuring columns like Classroom Insights, Ask the Expert and Professional Development, the *EDCompass* blog will keep you up-to-date with the latest news from SMART. You'll also have the opportunity to find, rate and comment on any of the articles. When the blog launches, find it at <http://SMARTEDCompassblog.com>.



## Suite Talk Your Way to Winning

If you've been using **SMART Classroom Suite™ interactive learning software**, we want to hear from you. Share your experiences in our Suite Talk Video Contest for a chance to win one of five SMART products! All you have to do is submit your favorite SMART Notebook lesson activity. Your activity should demonstrate the impact of SMART Classroom Suite software on student learning, collaboration, assessment and lesson delivery. It should also include an embedded video of 2–3 minutes showing how you use SMART Classroom Suite software to improve learning experiences and make class time more collaborative and productive.

Upload your lesson activity with the embedded video to the SMART Exchange website by February 10, 2011, at 11:59 p.m. (MT). [Find out how now!](#)

### SMART SHOWCASE SCHOOL PROFILE

## Louisiana School Creates Powerful Change with Differentiation and Technology



When Shannon Wall joined Donnie Bickham Middle School as principal in 2007, the school had been losing some of its best students to nearby magnet schools. It also had just one computer lab, and its School Performance Score was an average 71.1. [Read the full article.](#)

# SMART Notebook Math Tools = Engagement + Understanding

Any math teacher who's ever heard a student ask, "When am I ever going to use this?" knows how difficult it can be to explain math problems in terms students can understand. Often, the difficulty lies in relating complex concepts to practical applications students can use in the everyday world.

**SMART Notebook Math Tools software** adds interactive math tools and features to our popular **SMART Notebook collaborative learning software**, so you can present math concepts in a variety of ways – numerically, symbolically or in tables and graphs. This comprehensive set of math tools resonates with different learning styles, because students are better able to visualize problems and solutions. When students begin to make connections between concepts, it motivates them, and that means a higher level of engagement.

## Inspire participation with interactive lesson activities

Along with access to the Gallery and other tools available in SMART Notebook software, SMART Notebook Math Tools adds math-focused features, such as shape manipulation, a graph builder and an advanced equation editor, so you can create lesson activities that engage students visually and encourage them to explore concepts interactively.

With shape manipulation, you can create shapes, then divide and manipulate them, making it easier to demonstrate fractions. The table and graphing tools enable you to link data in tables with points plotted on a graph, and when you change the data in either one, the other updates automatically. With the equation editor, you can create, solve and graph math problems within SMART Notebook software. Even handwritten equations are recognized, so you can write equations on the fly and then solve them numerically or symbolically. All tools are accessible from a customizable math toolbar that features an irregular polygon tool and measurement tools such as a ruler, compass and protractor.

Add up these features and get a flexible set of interactive tools integrated into SMART Notebook software that improves engagement and retention for all your students – no matter their learning style.

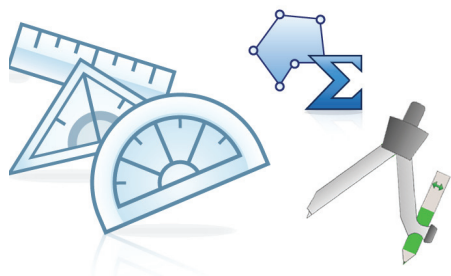


## Fast Facts



- **Made for math** – With SMART Notebook Math Tools, you can demonstrate key math concepts, from fractions and geometry to algebra and trigonometry, for all grade levels
- **Easy to use** – SMART Notebook Math Tools is an add-on to SMART Notebook collaborative learning software, so it's completely integrated into the software you already use every day. Its features are contained in a customizable toolbar for easy access from within SMART Notebook software.
- **Designed for every classroom** – You can use SMART Notebook Math Tools to teach math to students in all grades, from kindergarten to high school
- **Interactive** – The software is designed for use with a SMART Board interactive whiteboard, making your lessons more visual, hands-on and engaging
- **Flexible** – You can support multiple learning styles by creating graphs, tables and equations to represent complex concepts. And they can all be linked, which helps you demonstrate the relationships between them as you change or add values.
- **Versatile** – SMART Notebook Math Tools includes interactive features such as an equation editor, a custom graph builder, a compass and measurement tools that include a dynamic ruler and protractor. The software also recognizes handwritten math expressions, so you can create and solve problems on the fly.

## We Hear from Teachers



**We asked teachers who regularly use SMART Notebook Math Tools software to tell us what they think.**

"I just used the shape division in my class, and they absolutely loved it. We were adding fractions . . . and we picked them apart and then made new circles and figured out what was left over. It was the perfect parallel and visual for them . . . And pulling apart the pieces takes it to the next level of understanding, I believe. Certainly not all of your students need that, but some that never got it before, all of a sudden say, 'Ah! I understand why the denominators have to be the same now.'"

**David Sladkey**, Math Teacher, Naperville Central High School, Naperville, Illinois

"It has endless possibilities in the different types of mathematics that we teach, for example, trigonometry or geometry or an algebraic model of what we're looking at."

**Scott Miller**, Instructional Coordinator for Mathematics, Naperville Central High School, Naperville, Illinois

## Up Next

Watch for the next issue on SMART content and resources. And, if you plan to attend FETC in January, come by our booth to pick a printed copy.

## Ask Jeremy

Jeremy Greene is the product manager for SMART Notebook Math tools software. We asked him how its powerful features can help make math easier to learn and more engaging for students of all learning styles.

**EDCompass** How does SMART Notebook Math Tools software help teachers differentiate instruction?



Photo by: Jon Pernul. Photoshopped work by: Kevin Wibawa.

**Jeremy** SMART Notebook Math Tools allows educators and students to visualize math problems in multiple ways to suit varied learning styles. Powerful features like linking between tables, equations and graphs make it easy to understand important mathematical relationships that can sometimes be complex.

**EDCompass** Are there other ways SMART Notebook Math Tools software makes teaching and learning math easier?

**Jeremy** The software includes the unique ability to recognize math symbols and equations that have been handwritten on a SMART Board interactive whiteboard. This is a vital feature, as it helps save classroom time. A 2005 study showed that writing equations by hand was faster than typing them. Teachers were able to provide more practice time and move to more advanced material sooner. Students in the study stated that handwriting "made it easier."

SMART Notebook Math Tools also adds new functionality to popular SMART Notebook features. For example, it adds the ability to show angles and side lengths on shapes, it allows the manipulation of vertices, and, of course, it includes one of my favorite features – shape division. Shape division allows teachers to take any circle, square or rectangle and instantly divide it into equal parts, all labeled with their proper fraction. Each piece can then be moved and manipulated on its own. Teachers consistently tell me it is one of their favorite features. It makes teaching fractions much more interactive for both teachers and students.

**EDCompass** Is SMART Notebook Math Tools software difficult for teachers to learn?

**Jeremy** Teachers who already use SMART Notebook software will find it very easy to incorporate SMART Notebook Math Tools. The add-on is fully integrated, so teachers will not be required to learn an entirely new software product.

**EDCompass** What kind of feedback have you received about SMART Notebook Math Tools software?

**Jeremy** The feedback we have received has been phenomenal. SMART Notebook Math Tools has already become one of our most popular software products. And it's easy to see why – nearly 25 percent of SMART Notebook software users are math teachers, and this product was designed with their needs in mind. We've received many feature requests over the years, and we kept all of those ideas in mind while we were developing SMART Notebook Math Tools.